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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* ANDES MORIZON, JOSE CANALES,  
FERNANDO DEL RIO, FRANCISCO SANZ and  
LEANDRE ADIFON

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Appeal 2010-001891  
Application 10/561,557  
Technology Center 3600

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Before WILLIAM F. PATE III, STEFAN STAICOVICI and  
MICHAEL L. HOELTER, *Administrative Patent Judges*.

HOELTER, *Administrative Patent Judge*.

DECISION ON APPEAL

### STATEMENT OF THE CASE

This is a decision on appeal under 35 U.S.C. § 134(a), from a final rejection of claims 1-21. The real party in interest is Otis Elevator Company. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

#### References Relied on by the Examiner

Ando	US 6,435,316 B1	Aug. 20, 2002
Orrman	US 2002/0017434 A1	Feb. 14, 2002
Nakagaki	US 2002/0070080 A1	Jun. 13, 2002

#### The Claimed Subject Matter

The claimed subject matter is directed to a cable support for an elevator and more specifically to cable dead end hitches which extend above a lowermost surface of a bedplate. Independent claim 1 is illustrative of the claims on appeal and is reproduced below:

1. An elevator comprising:
  - an elevator car movable along car guide rails;
  - a counterweight movable along counterweight guide rails;
  - a bedplate supported by at least one of said car and counterweight guide rails; and
  - a machine supported by said bedplate and driving a tension member interconnecting said counterweight and said car, opposed ends of said tension member being connected at dead end hitches, said bedplate having a vertically lowermost surface, and said dead end hitches extending above said vertically lowermost surface, said dead end hitches associated with each of said opposed ends of said tension members being received on said bedplate and such that they will be between said car and a single wall when the elevator is mounted within an elevator shaft.

### The Rejections on Appeal

1. Claims 1, 2 and 4-20 are rejected under 35 U.S.C. § 103(a) as being obvious over Orrman and Nakagaki (Ans. 3).
2. Claim 3 and 21 are rejected under 35 U.S.C. § 103(a) as being obvious over Orrman, Nakagaki and Ando (Ans. 13).

### ISSUE

Has the Examiner established that one of ordinary skill in the art at the time of the invention would have had reason to connect opposed elevator cable ends to hitches extending above a vertically lowermost surface of a bedplate when it was known to connect opposed elevator cable ends to a support beam?

### FINDINGS OF FACT

1. Orrman discloses opposed elevator cable ends that are secured underneath a support beam (Orrman ¶ [0029] and Fig. 1).
2. Nakagaki discloses a pair of elevator cables each having an end secured above a lowermost surface of an I-beam (Nakagaki ¶ [0059] and Figs. 2 and 5).
3. Ando discloses multiple elevator cables secured above the uppermost surface of a support beam (Ando 1:25-27, 3:23-25 and Figs. 1-6, 9-11).

### PRINCIPALS OF LAW

The Examiner has the initial burden to set forth the basis for any rejection so as to put the patent applicant on notice of the reasons why the applicant is not entitled to a patent on the claim scope that he seeks – the so

called “*prima facie* case.” This “*prima facie* case” serves as a procedural mechanism that shifts the burden of going forward to the applicant, who must produce evidence and/or argument rebutting the case of unpatentability (*see In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992)).

## ANALYSIS

Appellants present separate arguments for independent claim 1 and dependent claims 2, 4, 6, 7 and 10 (App. Br. 4-7). Appellants argue claims 3 and 21 together (App. Br. 7-8). Each argument will be addressed below. Independent claims 11 and 16, as well as the remaining dependent claims, stand or fall with claim 1.

*1. The Subject Matter of Independent Claim 1 is Obvious in view of Orrman and Nakagaki.*

Claim 1 requires a machine supported on a bedplate that drives a tension member. The ends of the tension member are connected to hitches supported by the bedplate with these hitches “extending above said vertically lowermost surface” of the bedplate. The Examiner states that the elements of claim 1 are disclosed by Orrman except that Orrman is silent concerning “dead end hitches extending above the vertically lowermost surface” of the support (Ans. 3). The Examiner relies on Nakagaki to teach “dead end hitches 53, 63 end [sic.] extending above the vertical lowermost surface” of Nakagaki’s support beam (Ans. 4). The Examiner concludes that it would have been obvious to one skilled in the art to “extend the dead end hitches disclosed by Orrman et al. above the vertically lowermost surface as taught by Nakagaki et al. to facilitate the connection between the dead end hitch and the bedplate and protect the dead end hitch” (Ans. 4).

Appellants address different dead end hitches shown in Nakagaki (i.e., hitches 57/67 and not hitches 53/63 cited by the Examiner) (App. Br. 4). In view of these other hitches, Appellants contend that Nakagaki's hitches "are not positioned on the bedplate at all" and are "mounted to the underside of an element" (App. Br. 4). Accordingly, Appellants contend that Nakagaki does not "suggest modifying Orrman, et al. such that the dead end hitches were positioned vertically above" the bedplate nor in the claimed position of "between said car and a single wall" (App. Br. 4, *see also* Reply Br. 1). This argument is not persuasive as the Examiner specifically relies on Nakagaki's "dead end hitches 53, 63," and not hitches 57, 67 as argued by Appellants (Ans. 4). The hitches relied upon by the Examiner, i.e., 53 and 63, are located "between said car and a single wall" as claimed, and Nakagaki discloses these hitches as being on the same support beam and above its lowermost surface (Nakagaki ¶ [0059] and Fig. 2). Accordingly, Appellants' contentions are not persuasive.

Appellants also incorrectly contend that Nakagaki only teaches "one dead end hitch 53 on the same side as the machine" when, in fact there are two (App. Br. 4; Nakagaki ¶ [0059] and Fig. 5). Further, the Examiner's rationale for combining Orrman and Nakagaki is persuasive because such a combination would "facilitate the connection between the dead end hitch and the bedplate and protect the dead end hitch (Ans. 4, 15).

Based on the record presented, Appellants' contentions are not persuasive, and the Examiner's decision to reject claim 1 as obvious over Orrman and Nakagaki is affirmed.

2. *The Subject Matter of Dependent Claim 2 is Obvious in view of Orrman and Nakagaki.*

Claim 2 depends from claim 1 and further requires dead end hitches “mounted on said bedplate.” Appellants contend that “[w]hile this may well be implied by claim 1, to the extent an argument is made that claim 1 does not specifically require mounting on the bedplate, claim 2 certainly does” (App. Br. 5, *see also* Reply Br. 2). Orrman discloses “a rope whose first end is attached to a fixed top structure . . . and whose second end is attached to a fixed top structure” while Orrman’s Figure 1 discloses these rope ends attached to the same support 17 (Orrman ¶ [0008], *see also* ¶ [0029]). Nakagaki discloses a pair of elevator cables each having an end “fixed to a cross beam” (Nakagaki ¶ [0032] and Figs. 2 and 5, *see also* ¶ [0059] “hitched to the connecting beam”). Consequently, Orrman discloses dead end hitches 10 and 11 mounted on its bedplate and likewise, Nakagaki discloses dead end hitches 53, 63 mounted on its bedplate. Accordingly, Appellants’ contention is not persuasive, and the Examiner’s decision to reject claim 2 is affirmed.

3. *The Subject Matter of Dependent Claim 4 is Obvious in view of Orrman and Nakagaki.*

Claim 4 depends from claim 2 and further requires that the “bedplate is formed by a pair of C-shaped beams each having an internal space” and that “at least one” of the dead end hitches “is positioned within said internal space.” The Examiner states “Nakagaki et al. teaches the bedplate 33 is formed by a pair of C-shaped beams, creating an I-beam shown in Figure 2” and that anchoring ends 53, 63 are “positioned within the internal space” (Ans. 4). Appellants acknowledge that Orrman shows “a dead end hitch within the interior of an H-shaped channel” but contend that “both” dead end

hitches must be within this interior (App. Br. 5). Appellants' contention is not consistent with the claim language of "at least one" and Nakagaki's Figure 2 shows "at least one" of dead end hitches 53, 63 within this internal space. Accordingly, this contention is not persuasive, and the Examiner's decision to reject claim 4 is affirmed.

4. *The Subject Matter of Dependent Claim 6 is Obvious in view of Orrman and Nakagaki.*

Claim 6 depends from claim 1 and further requires "a plurality" of tension members and "two sets of a corresponding plurality of dead end hitches." Claim 6 also requires that the "dead end hitches of each of the two sets being aligned in an array that is generally parallel to a rotational axis of said machine." The Examiner states that "mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8" (Ans. 5-6). Appellants state that "[i]t is not appellant's contention that it has invented the concept of plural tension members, nor plural dead end hitches" but instead that there is no support for the Examiner's rejection that it was "obvious to so modify Orrman" with redundant tension members and dead end hitches because "[s]ince an obvious goal of Orrman, et al. is to minimize this space, it would destroy Orrman, et al. to do so" (App. Br. 5-6, *see also* Reply Br. 2).

Orrman specifies that an object of the invention is to "disclose an elevator that is as compact as possible . . . in both vertical and horizontal directions" (Orrman ¶ [0006]). However, Appellants' contention is contrary to Orrman's statement that while only a single rope is shown in Figure 1, "a plurality of adjacent ropes" can be employed and that "several rope pulleys may be placed side by side" (Orrman ¶ [0030]). Further, Orrman's Figures 1-3 disclose different embodiments with varying axes of rotation of drive 5



intermediate the opposite ends of support 17 where the cables are supported (Orrman ¶¶ [0033 and 0034]). “A person of ordinary skill is also a person of ordinary creativity, not an automaton” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007). Appellants have not shown that it would not have been beyond the ability of one skilled in the art to arrange the sets of dead end hitches “generally parallel to a rotational axis of said machine” as claimed. Accordingly, this contention is not persuasive, and the Examiner’s decision to reject claim 6 is affirmed.

5. *The Subject Matter of Dependent Claim 7 is Obvious in view of Orrman and Nakagaki.*

Claim 7 depends from claim 6 and further requires sets of dead end hitches “disposed on opposed lateral sides of said rotational axis of said machine.” The Examiner finds that “Orrman et al. discloses dead end hitches 10, 11 disposed on opposed lateral sides of the rotational axis of the machine 8” (Ans. 6). Appellants contend that to reach this rejection, “the Examiner must modify Orrman, et al. such that there are dead end hitches on both sides of its machine” which would improperly increase the space required (App. Br. 6, *see also* Reply Br. 2). The issue of Orrman’s compactness and plurality of ropes and pulleys was addressed *supra* (*see* Orrman ¶¶ [0006] and [0030]). Further, Orrman’s Figures 1-3 illustrate hitches 10, 11 on opposite lateral sides of the rotational axis of drive 8 (*see also* Orrman ¶ [0029]). Accordingly, Appellants’ contention is not persuasive, and the Examiner’s decision to reject claim 7 is affirmed.

6. *The Subject Matter of Dependent Claim 10 is Obvious in view of Orrman and Nakagaki.*

Claim 10 depends from claim 1 and further requires a plurality of sheaves and tension members with dead end hitches arranged such that “a

line drawn through one of the sheave surfaces and its two associated dead end hitches is perpendicular to a rotation axis of the traction sheave.” The Examiner relies on Nakagaki for teaching a plurality of sheaves and tension members with dead end hitches that are aligned as claimed (Ans. 8).

Appellants contend that this modification to Orrman “is not suggested at all by Nakagaki” and that “to place the redundant structure within the Orrman, et al. device would dramatically increase the required size” (App. Br. 6, *see also* Reply Br. 2). As previously discussed, Orrman, like Nakagaki, also teaches a plurality of ropes and pulleys and Orrman states that “[t]he entire machinery as well as the rope and rope pulleys can be located on one side of the elevator car as a compact package” (Orrman ¶¶ [0029] and [0011], *see also* [0006]). Nakagaki’s Figures 3-5 disclose an arrangement where a line drawn through one of the sheave surfaces and its two associated dead end hitches is perpendicular to a rotational axis of the traction sheave as claimed. Based on the record presented, Appellants’ contention is not persuasive, and the Examiner’s decision to reject claim 10 is affirmed.

7. *The Subject Matter of Dependent Claims 3 and 21 is Obvious in view of Orrman, Nakagaki and further in view of Ando.*

Claims 3 and 21 both depend from claim 2 and further require that the dead end hitches are supported “by a vertical uppermost portion” of said beam (claim 3) or said bedplate (claim 21). The Examiner relies on Ando for disclosing fastening members that “are supported by a vertical uppermost portion of the beam” and that it would have been obvious to support the dead end hitches in this position “to facilitate the connection between the bedplate and the dead end hitches” (Ans. 13-14).

Appellants do not dispute the Examiner’s findings but instead contend that there is “nothing within Ando that would suggest the claimed

positioning” where “a mount element is positioned between the car and the wall on the bedplate” (App. Br. 7-8). The alleged deficiencies are addressed above and, as Appellants make no other argument for the patentability of claims 3 and 21, we sustain the rejection of claims 3 and 21 as being obvious over Orrman, Nakagaki and Ando.

### CONCLUSION OF LAW

The Examiner established that one of ordinary skill in the art at the time of the invention would have had reason to connect opposed elevator cable ends to hitches extending above a vertically lowermost surface of a bedplate when it was known to connect opposed elevator cable ends to a support beam.

### DECISION

1. The rejection of claims 1, 2 and 4-20 as being obvious under 35 U.S.C. § 103(a) over Orrman and Nakagaki is affirmed.
2. The rejection of claims 3 and 21 under 35 U.S.C. § 103(a) as being obvious over Orrman, Nakagaki and Ando is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

### AFFIRMED

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